

REMARKS

Claims 1-38 are pending in this Application, of which Claim 1 is the independent claim. All claims stand rejected.

Claim 1 is being amended to further clarify the scope of the invention.

Claim 13 has been objected to for reciting “of of,” an obvious typographical error. Claim 13 is being amended to correct this error.

Objections to the Specification

The Specification has been objected to as failing to provide proper antecedent basis for the claimed subject matter. Specifically, it is asserted that the Specification does not provide antecedent basis for the limitation “operating software” as recited in Claim 13. Accordingly, Claim 13 is being amended to replace “operating software” with “software.” Support for this amendment is found at least on page 17, lines 2-4 (“The JPU 22 can also contain software for performing concurrency control, transaction management, recovery and replication of data for which the JPU is responsible”) and generally on pages 26-29 (describing JPU “software components”) of the Specification as originally filed.

The Abstract has been objected to for including the Title on the same page of the Application. The Abstract is being amended to correct this error.

Double Patenting

Claim 1 has been rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent Application No. 10/666,729, and over claim 1 of U.S. Patent No. 10/668,113. A Terminal Disclaimer is being filed concurrently with this Amendment to disclaim any terminal part of a patent that may issue from the Application that extends beyond the expiration of U.S. Patent Applications No. 10/666,729 and 10/668,113. Accordingly, the double patenting rejection of Claims 1 is believed to be overcome.

Rejection of Claims 1-38 under 35 U.S.C. § 102(e)

Claims 1-38 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kabra et al. (U.S. Patent No. 6,507,834). Applicants disagree with this rejection and request reconsideration.

Claim 1 is directed to an asymmetric data processing system comprising a first group of nodes comprising one or more host processors, a second group of nodes comprising one or more Job Processing Units (JPUs), and a network connecting the nodes within each group. To aid in understanding the present invention, Applicants refer to an exemplary embodiment represented in Figs. 1 and 7 of their Specification. Here, a host computer 12 communicates with Job Processing Units (JPUs) 22-1 – 22-i via a network 34, where each JPU 22 may access data at respective storage devices 23.

In an example operation, the host computer 12 receives requests from a requester 20, 33, 36 (e.g., a client computer or application) to process data stored at a plurality of storage devices 23 (e.g. hard disk drives). A plan generator (204 at Fig. 3) at the host computer 12 generates a plan for processing the request (Specification, page 46, lines 21-27). The plan comprises a number of jobs, which are distributed among the JPUs 22-1 – 22-3 (Fig. 7) and host computer 12 (Specification, page 48, lines 24-27). Each job further comprises a sequence of instructions that are executed by the JPUs 22-1 – 22-3.

In completing these jobs, each JPU 22-1 – 22-3 operates autonomously and asynchronously from one another. (Specification, page 9, lines 1-14). For example, each JPU 22 may be configured such that it can complete requests without waiting for input from other JPUs. As a result, each JPU may schedule jobs without regard for scheduling at other JPUs, thereby enabling each JPU to optimize processing of requests (Specification, page 11, lines 7-12 and lines 22-27).

Kabra discloses a method for parallel execution of queries at multiple data servers (Kabra, Abstract). As shown in Fig. 1, a query coordinator (QC) 104 receives a query from a client process 102 (col. 7, lines 27-37). The QC 104 generates an execution plan for the query and transmits portions of the plan to several data servers 130A-E. The QC 104 controls the parallel execution of the plan on the data servers 130. Fig. 6A illustrates this process, where the data servers 130A-B each receive a portion of the execution plan (610A-B), and then execute

that portion of the plan (612A-B) (col. 11, lines 29-38). The data servers 130A-B transmit results of the execution to the QC 104, which compiles the results and transmits the compiled results to the client 102.

Kabra does not disclose a data processor arranged as recited in Claim 1. As stated above, Kabra describes a method of coordinating parallel execution of a query on multiple data servers. In contrast to the JPU of the present invention, however, the data servers 130 of Kabra do not operate “autonomously and asynchronously from one another.” As shown in Figs. 2 and 3, Kabra uses a parallelizer 202 to create a plan for parallel execution of a data query. The plan is distributed as “segments” among data servers 130 (col. 9, lines 27-30). These segments are “executed concurrently by different data servers 130,” and so “the parallelism of database system 100 is established” (col. 9, lines 16-20). Kabra only describes executing segments concurrently at the data servers 130 as above, and fails to teach or suggest the data servers 130 operating asynchronously from one another. For at least the above reasons, Kabra fails to disclose an “asymmetric data processing system” as recited in Claim 1 of the present Application.

Claims 2-38 each depend from Claim 1 and thus are allowable at least for the reasons stated above. As a result, the §102 rejection of Claims 1-38 is believed to be overcome, and reconsideration is respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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